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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER.

SCHWARTZ, PAMELA R

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,947

Applicant(s)

MANDAI ET AL.

Examiner

Pamela R. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 6-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-12 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5, 12, drawn to a recording medium, classified in class 428, subclass 32.1.
- II. Claims 6-11, drawn to a process of making, classified in class 427, subclass 146.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group II and of Group I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a materially different process such as by casting the coating solution on a temporary surface, drying to form a film layer, and transferring the dried film to the substrate surface.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Maguire on June 6, 2005, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-5, 12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6011 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakano et al. (US 2003/0186003). The reference discloses a recording medium for ink jet recording comprising a coloring agent accepting layer that is formed from a dispersion of the invention, a water-soluble resin, a cross-linking agent, a mordant, and other materials [0040]. The dispersion includes fine particles which may be inorganic [0050, 0051, 0054]. The water soluble resin may be an acetoacetyl modified polyvinyl alcohol [0102]. A zirconium nitrate or zirconium hydroxychloride may be present as a mordant [0134]. These materials are coated onto a support to form an ink jet recording medium [0160,0161].

3. Claims 1-5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuji et al. (Japanese Publication Number 01-156,597). The reference discloses a

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paper-coating agent including an acetoacetate ester group-containing polyvinyl alcohol resin and a zirconium salt. Specifically mentioned as a preferred zirconium salt is zirconium nitrate, however, it would have been obvious to one of ordinary skill in the art to include other well known zirconium salts, including that of claim 3. The reference does not disclose inclusion of inorganic powder. Inclusion of this conventional material would have been obvious to one of ordinary skill in the art for a number of reasons, e.g. as a matting agent, to affect visual properties, such as brightness, or to increase absorption of the surface. Since the patent is to a treated paper, an ink jet recordable material is inherently formed. With respect to claims 4 and 5, the limitations of these claims are considered to be a conventional value for the polymerization degree and a conventional formation technique that would have been obvious to one of ordinary skill in the art.

4. Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al. (US 2003/0186003) or Shuji et al. (Japanese Publication Number 01-156,597) either reference taken alone or in further view of Tomizawa et al. (6,224,971). While the polymerization degree of claim 4 and the formation reaction of the modified polyvinyl alcohol of claim 5 appear to be conventional in the art and would have been obvious to one of ordinary skill in the art, the secondary reference discloses an acetoacetylated polyvinyl alcohol for inclusion in an ink jet recording material and having a polymerization degree that is preferably 1000 to 2000 "in view of the balance of various properties of the coating composition and the ink-receptive layer formed therefrom" (see col. 2, lines 45-60). The reference discloses that if the polymerization

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degree is too low, the ink receptive layer will be poor in fixing of ink and in water resistance. Based upon this disclosure, it would have been obvious to one of ordinary skill in the art to include an acetoacetylated polyvinyl alcohol with a sufficient polymerization degree to avoid the negative impacts disclosed by the secondary reference.

The secondary reference also teaches that while any method can be used to prepare the modified polyvinyl alcohol employed therein, an example of such a method is subjecting the polyvinyl alcohol to an addition reaction with diketene (col. 3, lines 7-15). Based upon this suggestion to form modified polyvinyl alcohol through reaction of polyvinyl alcohol with a diketene, and the silence of the primary references concerning a formation technique for the modified polyvinyl alcohol, it would have been obvious to one of ordinary skill in the art to adopt the method suggested by the secondary art to obtain an acetoacetylated polyvinyl alcohol for inclusion in an ink jet recording medium or a paper treating formulation.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela Schwartz whose telephone number is (571) 272-1528.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

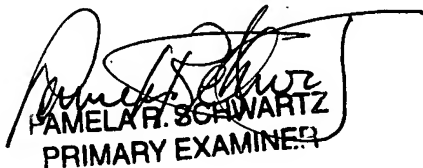
Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

PRSchwartz

June 26, 2005



PAMELA F. SCHWARTZ
PRIMARY EXAMINER